EXHIBIT D

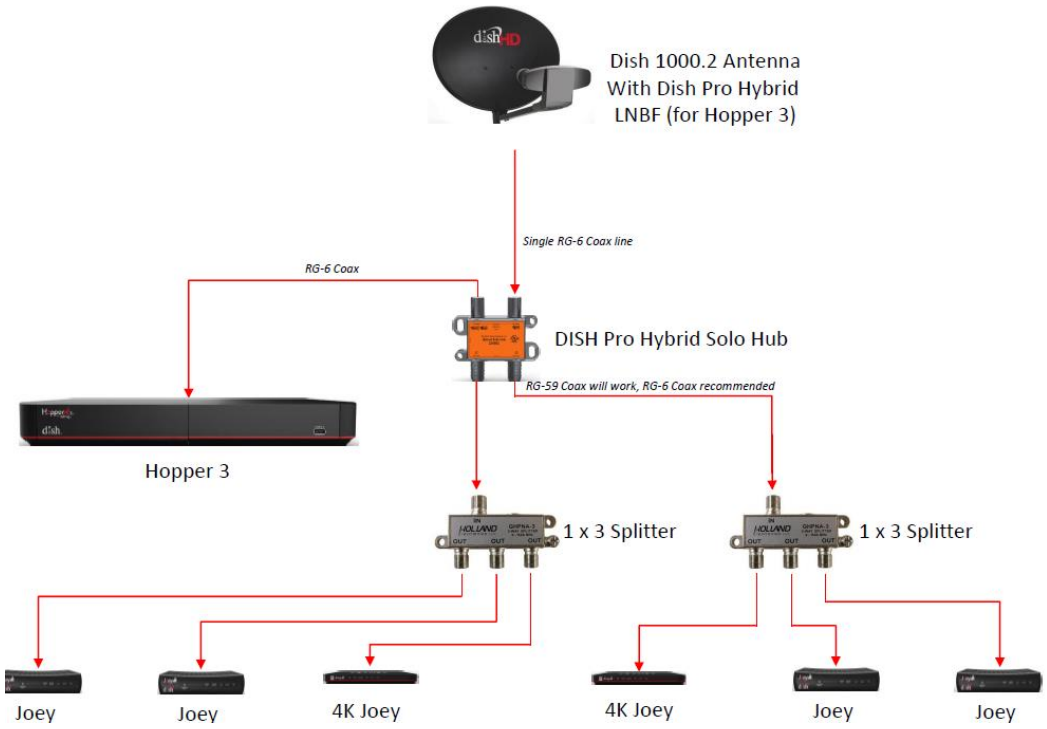
U.S. Patent No. 7,594,249 ("the '249 Patent") Exemplary Infringement Chart

The Accused MoCA Instrumentalities are instrumentalities that DISH deploys to provide a whole-premises DVR network over an on-premises coaxial cable network, with DISH "Hopper" and "Joey" nodes operating with data connections compliant with MoCA 1.0, 1.1, and/or 2.0. The Accused MoCA Instrumentalities include the DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, DISH Hopper 3, DISH 4K Joey, and DISH Joey 3, and substantially similar instrumentalities. DISH literally and/or under the doctrine of equivalents infringes the claims of the '249 Patent under 35 U.S.C. § 271(a) by making, using, selling, offering for sale, and/or importing the Accused MoCA Instrumentalities.

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
10. A broadband local area network for transmitting modulated signals using coaxial cable building wiring containing a plurality of branches comprising:	The Accused Services are provided using at least the Accused MoCA Instrumentalities including the DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, DISH Super Joey, DISH Hopper 3, DISH 4K Joey, and DISH Joey 3, and devices that operate in a similar manner. The Accused MoCA Instrumentalities operate to form a broadband local area network for transmitting modulated signals using coaxial cable building wiring containing a plurality of branches as described below. The DISH full-premises DVR network constitutes a broadband local area network as claimed. The DISH full-premises DVR network is a MoCA network created between at least one Hopper DVR and one or more Joey receivers using the on-premises coaxial cable network. This MoCA network is compliant with MoCA 1.0, 1.1, and/or 2.0. "The MoCA system network model creates a coax network which supports communications between a convergence layer in one MoCA node to the corresponding convergence layer in another MoCA node." (MoCA 1.0, Section 1. *See also* MoCA 1.1, Section 1.1; MoCA 2.0, Section 1.2.2)

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	"The MoCA Network transmits high speed multimedia data over the in-home coaxial cable infrastructure." (MoCA 1.0, Section 2. *See also* MoCA 1.1, Section 2; MoCA 2.0, Section 5) "The MoCA Network transmits high speed multimedia data over the in-home coaxial cable infrastructure." (MoCA 1.0, Section 2. *See also* MoCA 1.1, Section 2; MoCA 2.0, Section 5) "The MoCA physical layer (PHY) utilizes a modulation technique named Adaptive Constellation Multi-tone (ACMT). ACMT is a variation of orthogonal frequency division multiplexing (OFDM) where knowledge of the channel is used to pre-equalize all signals using variable bitloading on all subcarriers." (MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5) DISH utilizes the MoCA standard to provide an on-premises DVR network over an on-premises coaxial cable network as described below:

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent



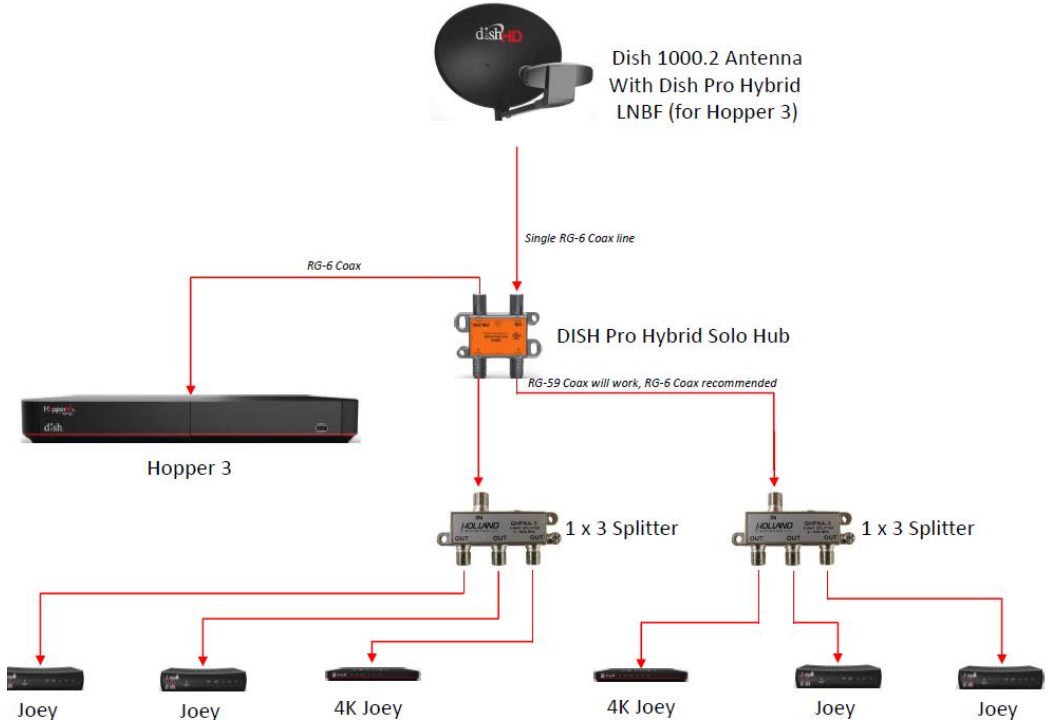
DISH PRO HYBRID SOLO HUB: This Solo Hub is a home video network device that combines multi-orbital coaxial cable satellite feeds from a DISH 1000.2 antenna or switch into a single-cable coaxial satellite feed to support MoCA networking for the Hopper 3 DVRs (host). The client ports are intended to feed up to 6 Joey client receivers (clients). The Solo Hub creates a MoCA video network for Hopper DVRs and Joeys. Rated 50 MHz to 3 GHz.

SPLITTERS: 1 GHz common splitters can be used to feed Joey client receivers.

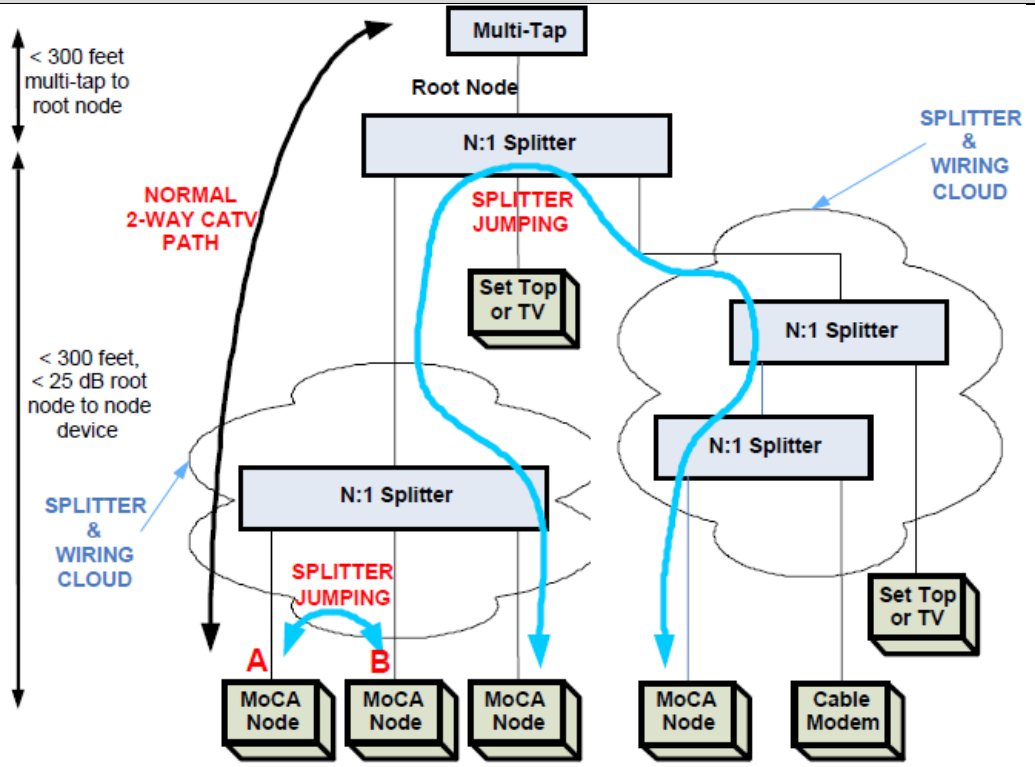
HOPPER 3: The Hopper 3 is the revolutionary whole-home DVR from DISH that

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	includes 16 satellite tuners and a 2TB hard drive. JOEY: The Joey is the MoCA thin-client receiver that networks with the Hopper for viewing on additional TVs. 4K JOEY: The 4K Joey is an option for installation on additional 4K TVs. DISH PRO HYBRID 42 SWITCH: This switch allows two Hopper 3 DVRs to be installed using a single DISH traditional 1000.2 antenna. Each Hopper 3 forms its own MoCA video network with connected Joeys. The switch comes with a 110VAC power supply unit. Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home. Using the PrimeTime Anytime® feature, you can record up to six HD channels simultaneously (with your local ABC, CBS, FOX and NBC channels provided in HD, which may not be available in all markets). It is one HD DVR that works independently on as many as four different TVs at the same time, so everyone can be in different room watching their favorite TV programming. Joey® receivers (Joey®, SuperJoey®, Wireless Joey®, 4K Joey™) connect to other TVs in your home and link to the Hopper 3 system, creating a Whole-Home DVR network. It supports all of the features of the Hopper 3 (with the exception of Picture-In-Picture) and offers an identical user interface as the Hopper 3. You can connect a Joey receiver to a high-definition or standard-definition TV.

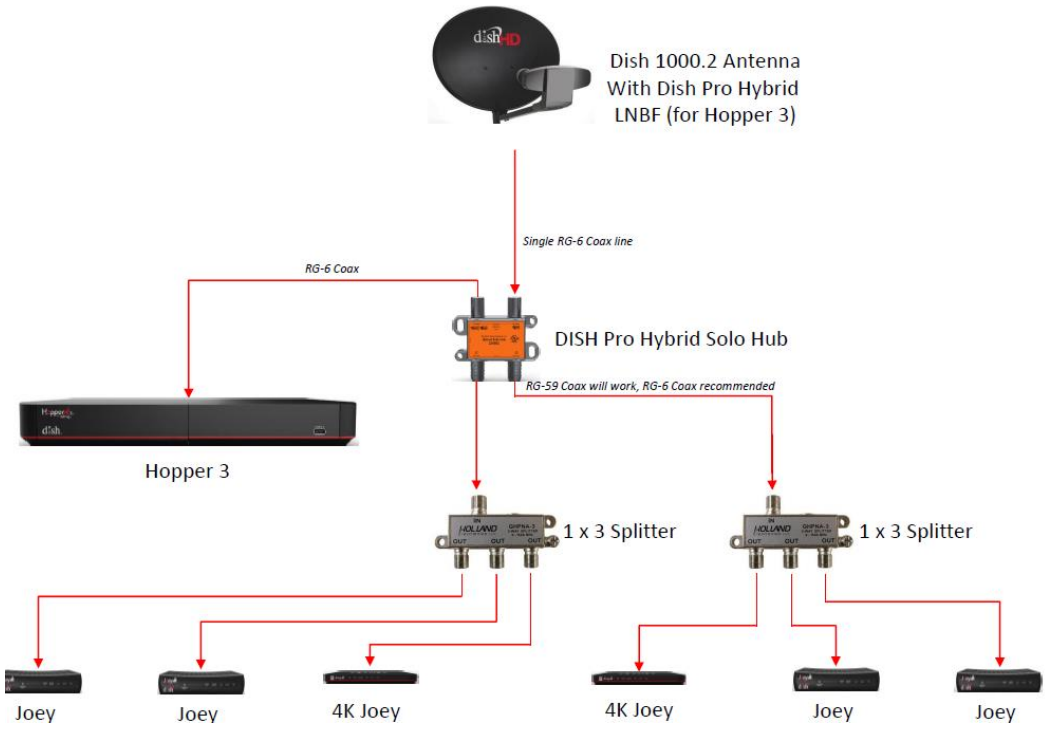
U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	CONNECTING THE JOEY RECEIVER(S) This section describes how to connect the receiver's HOME VIDEO NETWORK connection to one or more cable-ready remote TV(s) located in other room(s) away from the Hopper. You can use these instructions to connect TVs in your home to see live and recorded programming from the Hopper. This installation uses your in-home coaxial cable system. If your home does not have built-in cabling, it will be necessary to run these cables from the Hopper HD DVR to each Joey Receiver conected to a remote TV. Due to the potential complexity of this installation, you should have this professionally installed. Call the DISH Customer Service Center at 1-800-333-DISH (3474) for more information. If you need another remote control, be sure to order the replacement remote control kit for Hopper and Joey that uses UHF-2G signals. Call your DISH retailer, or visit www.mydish.com online, select Upgrades, then Products, and click on Remote & Accessories. 1 Connect the HOME VIDEO NETWORK output on the back of the Hopper HD DVR to an existing wall cable outlet using a coaxial cable. 2 Connect the Joey Receiver(s) in other room(s) to existing wall cable outlet(s) using coaxial cable(s). 3 Connect the Joey Receiver(s) to an audio/video input of the remote TV in each room. • If it is a high-definition TV or monitor and an HDMI connection is available on the remote TV, use a single HDMI cable from the output on the back of the Joey Receiver to provide high-quality audio and HD/SD video. See page 94. • If it is a standard-definition TV or an HDMI connection is not available on the remote TV, use composite (yellow) video and stereo audio cables from the outputs on the back of the Joey Receiver. See page 95. 4 Turn on every Joey Receiver and remote TV connected to the in-home cabling system. If you have not already done so, you may need to pair a remote control to each Joey. 5 Follow the on-screen prompts or included instructions for linking each Joey Receiver to your Hopper HD DVR. (The Hopper is the host for DISH Whole-Home DVR services.) 6 Confirm that you see a picture from your Joey Receiver(s) on your remote TV(s). • If your picture looks good, then you are finished with this procedure. • If your TVs do not display a picture or if the picture is not as clear as you would like it to be, repeat the steps to confirm all the connections. Coaxial connections should be hand-tightened.
a filter located at the point of entry of the	The Accused MoCA Instrumentalities operate to form a broadband local area

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
building wiring that rejects network signals originating in the building wiring such that the rejected network signals do not pass through the filter, but rather are reflected by the filter back into all branches of the building wiring;	network having a filter located at the point of entry of the building wiring that rejects network signals originating in the building wiring such that the rejected network signals do not pass through the filter, but rather are reflected by the filter back into all branches of the building wiring as described below. For example, the DISH on-premises DVR network includes at least a DISH Pro Hybrid Solo Hub and/or at least one splitter having a filter. 

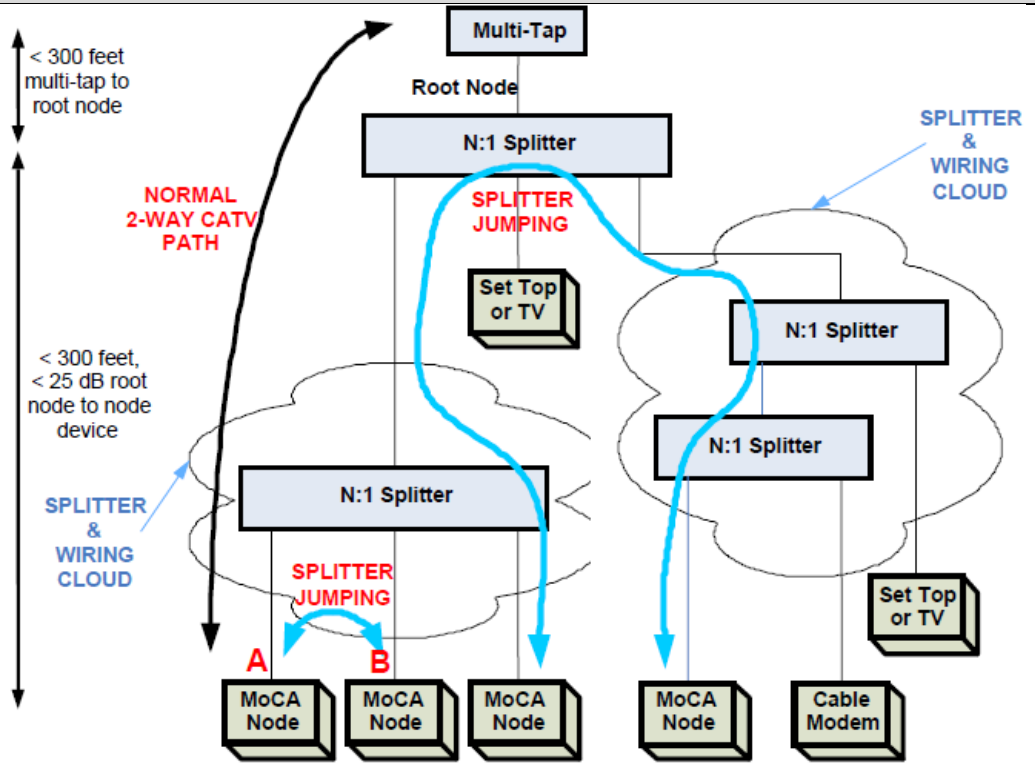
U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	DISH PRO HYBRID SOLO HUB: This Solo Hub is a home video network device that combines multi-orbital coaxial cable satellite feeds from a DISH 1000.2 antenna or switch into a single-cable coaxial satellite feed to support MoCA networking for the Hopper 3 DVRs (host). The client ports are intended to feed up to 6 Joey client receivers (clients). The Solo Hub creates a MoCA video network for Hopper DVRs and Joeys. Rated 50 MHz to 3 GHz. SPLITTERS: 1 GHz common splitters can be used to feed Joey client receivers. "The MoCA system network model creates a coax network which supports communications between a convergence layer in one MoCA node to the corresponding convergence layer in another MoCA node." (MoCA 1.0, Section 1. *See also* MoCA 1.1, Section 1.1; MoCA 2.0, Section 1.2.2)

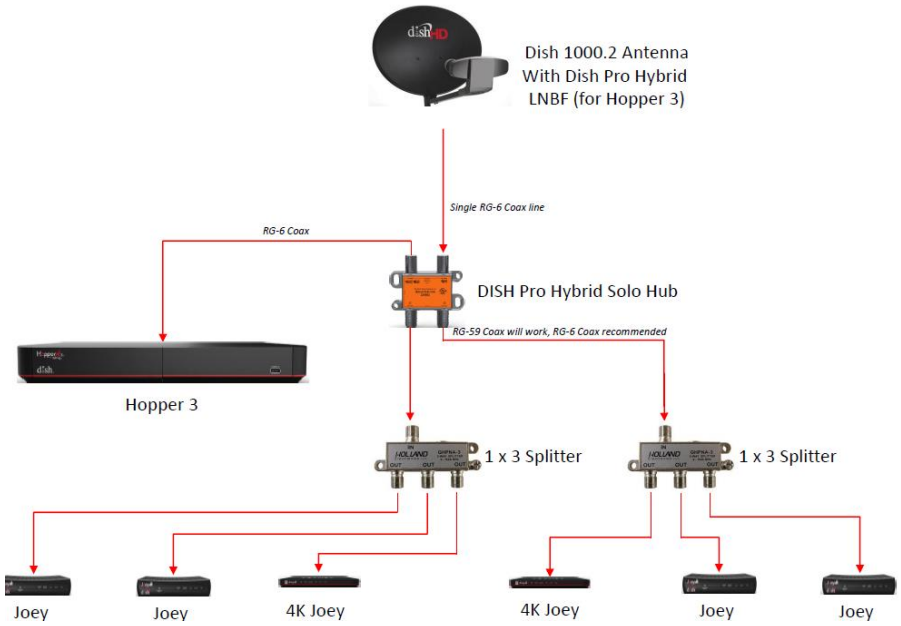
U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	 **Figure 2-1. A Typical In-home Cable Network** (MoCA 1.0, Figure 2-1. *See also* MoCA 1.1, Figure 2-1; MoCA 2.0, Figure 1-1) "Because of the effects of splitter jumping and reflections, the channel characteristics for a link between two nodes may be dramatically different than a link between any other two nodes. Channel characteristics are also sensitive to the direction of the communication, so a reverse path may be different than the forward path."

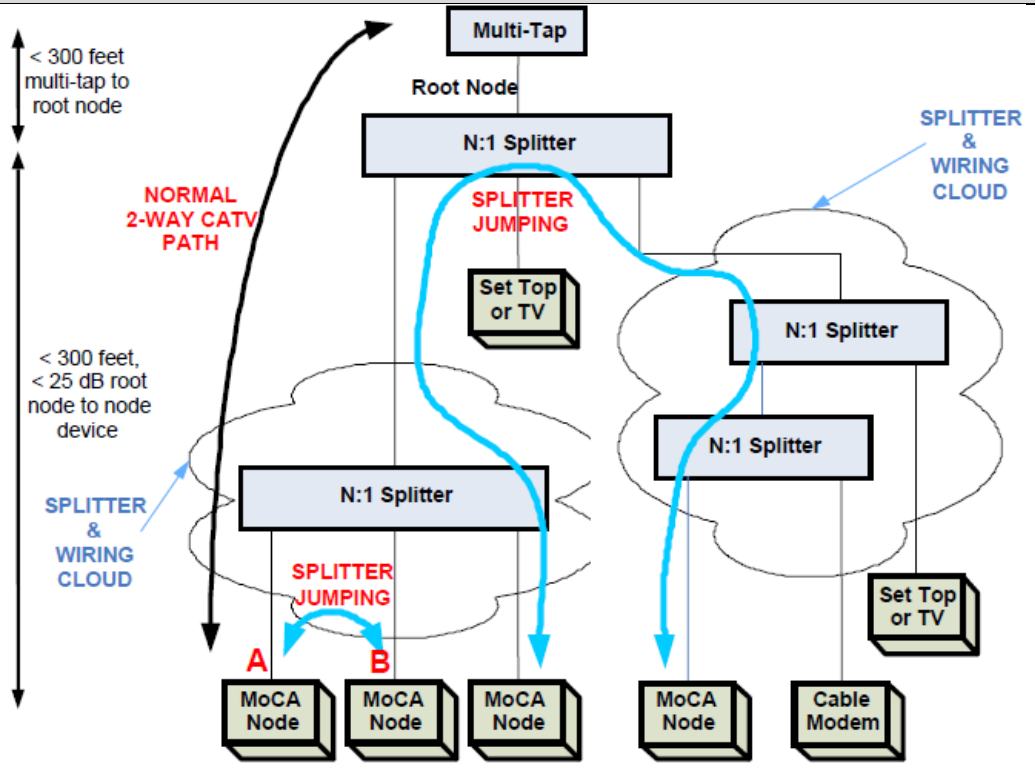
U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	(MoCA 1.0, Section 2.1.2. See also MoCA 1.1, Section 2.1.2; MoCA 2.0, Section 1.2.2) "Device performance may be dependent on filters required by the vendor which are external to the main enclosure of the MoCA device. In such cases the vendor may install the filters to meet the required performance specified in this section." (MoCA 1.0, Section 8. *See also* MoCA 1.1, Section 8; MoCA 2.0, Section 15)
at least one signal splitter;	The Accused MoCA Instrumentalities operate to form a broadband local area network having at least one signal splitter as described below. For example, the DISH on-premises DVR network includes at least a DISH Pro Hybrid Solo Hub and/or at least one splitter.

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	 DISH PRO HYBRID SOLO HUB: This Solo Hub is a home video network device that combines multi-orbital coaxial cable satellite feeds from a DISH 1000.2 antenna or switch into a single-cable coaxial satellite feed to support MoCA networking for the Hopper 3 DVRs (host). The client ports are intended to feed up to 6 Joey client receivers (clients). The Solo Hub creates a MoCA video network for Hopper DVRs and Joeys. Rated 50 MHz to 3 GHz. SPLITTERS: 1 GHz common splitters can be used to feed Joey client receivers.

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	"Typical in-home coaxial networks are configured as a branching tree topology with the point of demarcation being at the point of entry, typically on the side of the house, and outlets distributed throughout the house. The point of entry is typically connected to the first splitter in the home through a coax cable. In order to get MSO services, the point of entry must be connected to a multi-tap in the MSO's coax distribution plant. In this document, the point of connection to the first splitter is called the root node. The MoCA devices inside the home communicate with each other by having their signals traverse across one or more splitters. When the signal traverses between two outputs of a single splitter, this is referred to as 'splitter jumping'. Splitter jumping is always necessary when the signal must traverse between outlets in the home." (MoCA 1.0, Section 2.1.1. *See also* MoCA 1.1, Section 2.2.1; MoCA 2.0, Section 1.2.2)

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	 **Figure 2-1. A Typical In-home Cable Network** (MoCA 1.0, Figure 2-1. *See also* MoCA 1.1, Figure 2-1; MoCA 2.0, Figure 1-1)
a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency	The Accused MoCA Instrumentalities operate to form a broadband local area network with a plurality of terminal devices connected to the wiring branches, each terminal device capable of communicating with other terminal devices the reflected signal path created by the filter, wherein the terminal devices perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals as

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
response to overcome communication channel impairments caused by the reflected signals.	described below. For example, the Accused MoCA Instrumentalities constitute terminal devices connected to the wiring branches and capable of communicating with other terminal devices the reflected signal path created by the filter. By virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that perform equalization on the received signal that restores a flat frequency response to overcome communication channel impairments caused by the reflected signals. 

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	 Figure 2-1. A Typical In-home Cable Network (MoCA 1.0, Figure 2-1. *See also* MoCA 1.1, Figure 2-1; MoCA 2.0, Figure 1-1) "The MoCA physical layer (PHY) utilizes a modulation technique named Adaptive Constellation Multi-tone (ACMT). ACMT is a variation of orthogonal frequency division multiplexing (OFDM) where knowledge of the channel is used to pre-equalize all signals using variable bitloading on all subcarriers."

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	(MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5) "ACMT uses multicarrier transmission, much like OFDM." (MoCA 1.0, Section 4.3.6. *See also* MoCA 1.1, Section 4.3.6; MoCA 2.0, Section 5.2) "While it is physically a shared medium, the logical network model is a fully meshed collection of point-to-point links, each with its own unique channel characteristics and channel capacity. MoCA devices use optimized PHY parameters between every point to point link. Each set of optimized PHY parameters is called a PHY Profile. Because each link is unique, it is critical that all nodes know the source and the destination for every transmission." (MoCA 1.0, Section 2.1.2. *See also* MoCA 1.1, Section 2.1.2; MoCA 2.0, Section 1.2.2) "The topology of the in-home coax typically results in a multi-path delay profile. Because the echoes can be stronger and/or weaker than the original signal, depending on the output port-to-output port isolation of the jumped splitter, the channel is said to have either pre- or post-echoes, respectively. A zero decibel echo, i.e., equal power to the main path, leads to deep nulls in the frequency domain spectrum. In order to achieve target packet error rates of less than 10^{-5} for large packets (>1500 bytes) with no retransmissions, the MoCA physical layer uses channel pre-equalization (using bit loading) and multi-tone modulation on all links." (MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5.2) "ACMT is a variation of orthogonal frequency division multiplexing (OFDM)

U.S. Patent No. 7,594,249	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 10 of the '249 Patent
	where knowledge of the channel is used to pre-equalize all signals using variable bitloading on all subcarriers. The term used to describe the bitloading of the ACMT subcarriers is "modulation profile" and the process of creating a modulation profile between a node pair is called "modulation profiling". During periodic modulation profiling, probes are sent between all nodes and analyzed. After probe analysis, modulation profiles are chosen to optimize individual link throughput while maintaining a low packet error rate." (MoCA 1.0, Section 2.2. *See also* MoCA 1.1, Section 2.2; MoCA 2.0, Section 5)